CLAIMS

1. A method of power control for a transmitter in a cellular communication system comprising the steps of:

in a first mode of operation

determining power control data in response to a quality parameter of a communication between a base station and a communication unit, and

communicating the power control data between the base station and the communication unit;

entering a reduced power mode of operation by communicating power down power control data between the base station and the communication unit;

operating in the reduced power mode by communicating power control data corresponding to a reduced transmit power level; and

exiting the reduced power mode by communicating power up power control data between the base station and the communication unit.

2. A method as claimed in claim 1 wherein the power control is an uplink power control and the power control data is transmitted from the base station to the communication unit.

3. A method as claimed in claim 1 wherein the power control is a downlink power control and the power control data is transmitted from the communication unit to the base station.

4. A method as claimed in any previous claim wherein the reduced transmit power level is substantially zero.

5. A method as claimed in any previous claim wherein the power control data communicated in the reduced power mode is power down control values.

6. A method as claimed in any previous claim wherein the reduced transmit power level allows a reduced data rate communication between the communication unit and the base station.

7. A method as claimed in any previous claim wherein the step of exiting comprises transmitting power up power control data until the transmit power corresponds to a power level determined in response to the quality parameter.

8. A method as claimed in any previous claim 1 to 6 wherein the step of exiting comprises transmitting power up power control data until the transmit power corresponds to a power level corresponding to the power level prior to entering the reduced power mode.

9. A method as claimed in any previous claim wherein a duration of the reduced power mode is less than a data re-transmission interval associated with the communication between the communication unit and the base station.

10. A method as claimed in any previous claim further comprising the step of determining that a quality level of the communication between the communication unit and the base station cannot be achieved, and in response entering the reduced power mode.

11. A method as claimed in any previous claim further comprising the step of determining that a transmit power of the transmitter exceeds a threshold and in response entering the reduced power mode.

12. A method as claimed in any previous claim further comprising the step of determining that an interference level exceeds a threshold and in response entering the reduced power mode.

13. A method as claimed in any previous claim further comprising the step of determining that a propagation characteristic exceeds a threshold and in response entering the reduced power mode.

14. A method as claimed in any claim 13 wherein the propagation characteristic is a path loss of a communication link supporting the communication between the communication unit and the base station.

15. A method as claimed in any previous claim further comprising the step of determining that a duration of the reduced power mode exceeds a threshold and in response exiting the reduced power mode.

16. A method as claimed in any previous claim further comprising the step of determining that a quality characteristic of a data communication between the communication unit and the base station is improving and in response exiting the reduced power mode.

17. A method as claimed in any previous claim further comprising the step of determining that an interference level is below a threshold and in response exiting the reduced power mode.

18. A method as claimed in any previous claim further comprising the step of determining that a propagation characteristic is below a threshold and in response exiting the reduced power mode.

19. A method as claimed in any claim 17 wherein the propagation characteristic is a path loss of a communication link supporting the communication between the communication unit and the base station.

20. A method as claimed in any previous claim further comprising the steps of:

determining an expected interference level for a plurality of communication units including the communication unit;

determining a total expected interference level; and

entering the communication unit into the reduced power mode if the total expected interference level exceeds a threshold.

21. A method as claimed in any previous claim wherein the power control is operated in accordance with the 3rd Generation Partnership Project Technical Specification TS 25.214.

22. A computer program enabling the carrying out of a method according to claim 21.

23. A record carrier comprising a computer program as claimed in claim 22.

24. An apparatus for power control for a transmitter in a cellular communication system, the apparatus comprising:

means for, in a first mode of operation,

determining power control data in response to a quality parameter of a communication between a base station and a communication unit, and

communicating the power control data between the base station and the communication unit;

means for entering a reduced power mode of operation by communicating power down power control data between the base station and the communication unit;

means for operating in the reduced power mode by communicating power control data corresponding to a reduced transmit power level; and

means for exiting the reduced power mode by communicating power up power control data between the base station and the communication unit.